

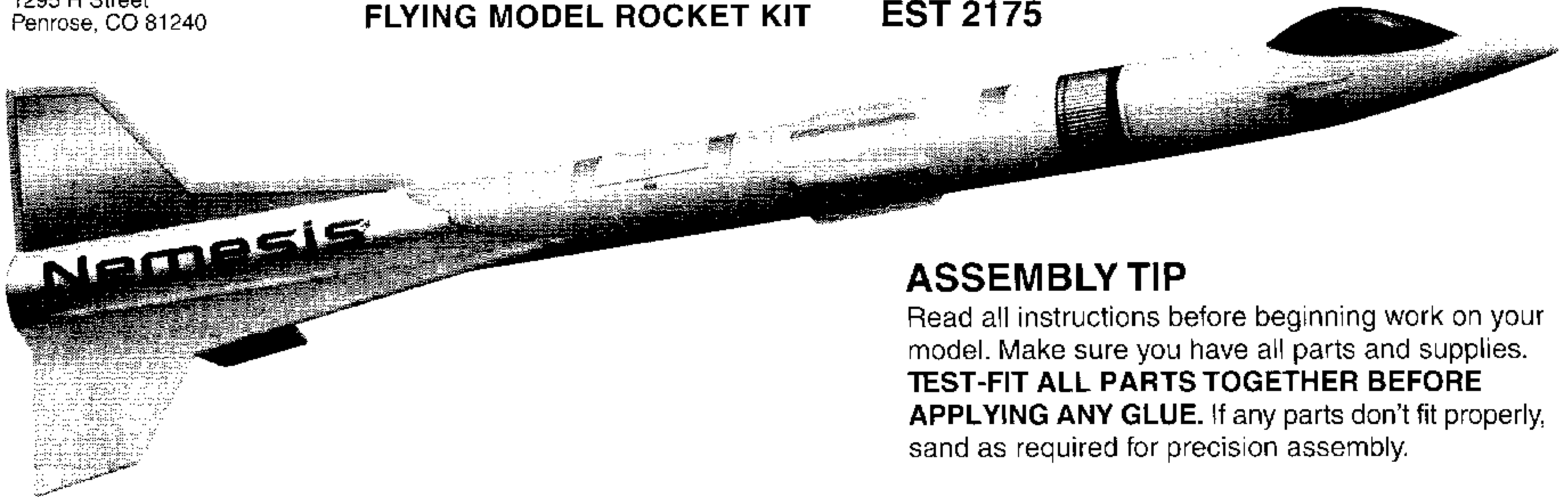


www.estesrockets.com

Estes Industries
1295 H Street
Penrose, CO 81240

Nemesis™

FLYING MODEL ROCKET KIT EST 2175



ASSEMBLY TIP

Read all instructions before beginning work on your model. Make sure you have all parts and supplies. **TEST-FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE.** If any parts don't fit properly, sand as required for precision assembly.

SUPPLIES

In addition to the parts included in the kit you will also need:



SCISSORS



PENCIL



RULER



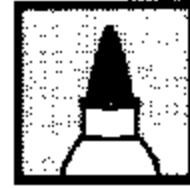
CARPENTER'S
GLUE



MODELING
KNIFE



WAX
PAPER



BLACK
FELT
MARKER
(FINE POINT)



PRIMER
WHITE
AND
CLEAR
COAT



SPRAY PAINT
GRAY AND
SILVER OR
BLUE, BLACK
AND YELLOW



MASKING
TAPE



FINE
SAND
PAPER



OPTIONAL:
BLACK 1/32"
(1 MM) PIN
STRIPE TAPE

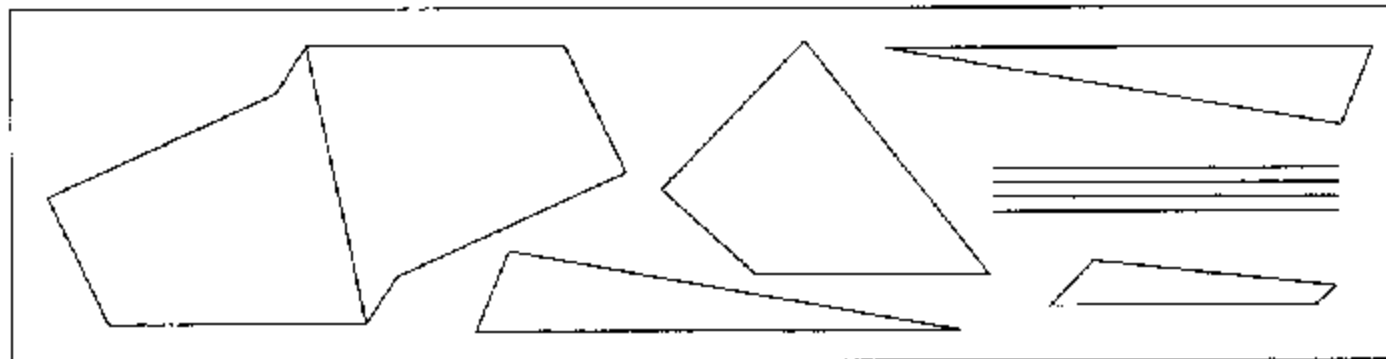
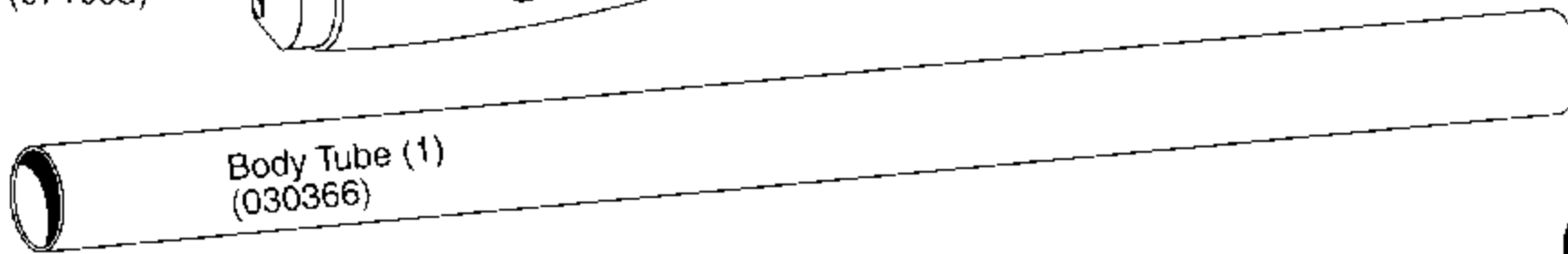
PARTS

Locate the parts shown below and lay them out on the table in front of you. **DO NOT USE THIS DRAWING TO ASSEMBLE YOUR ROCKET.**

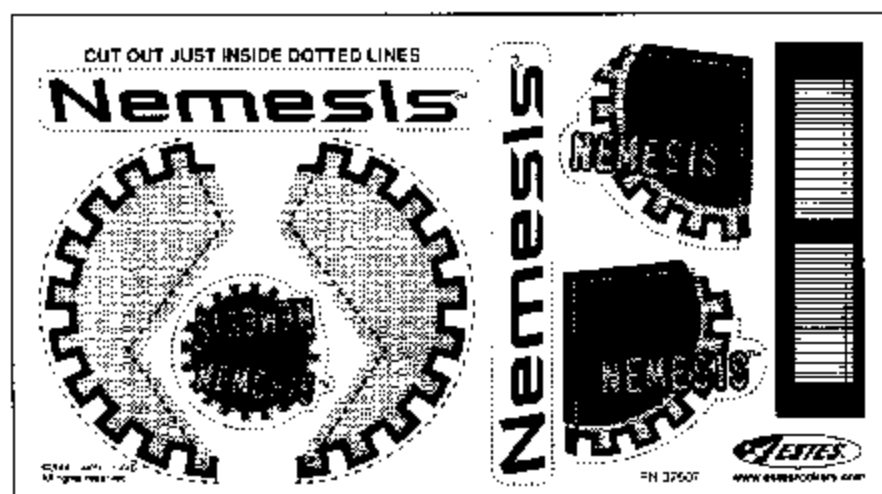
Nose Cone (1)
(071005)



Body Tube (1)
(030366)

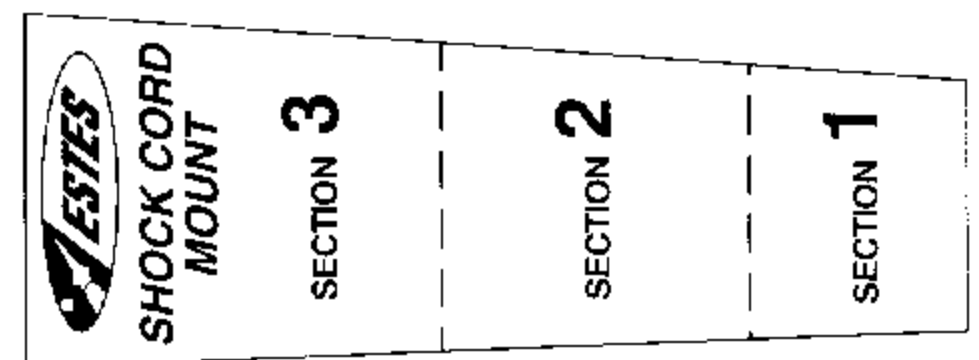


Die-cut Balsa Sheet (1) (032245)



Decal Sheet (1) (037507)

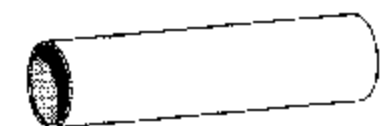
CUT OUT
(FOR STEP "8")



Green Engine Block (1)
(030162-9)



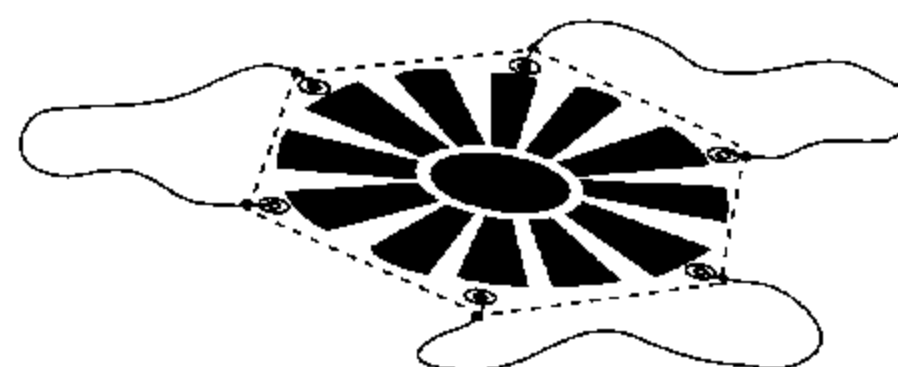
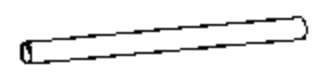
Blue Engine
Mount Tube (1)
(030326-1)



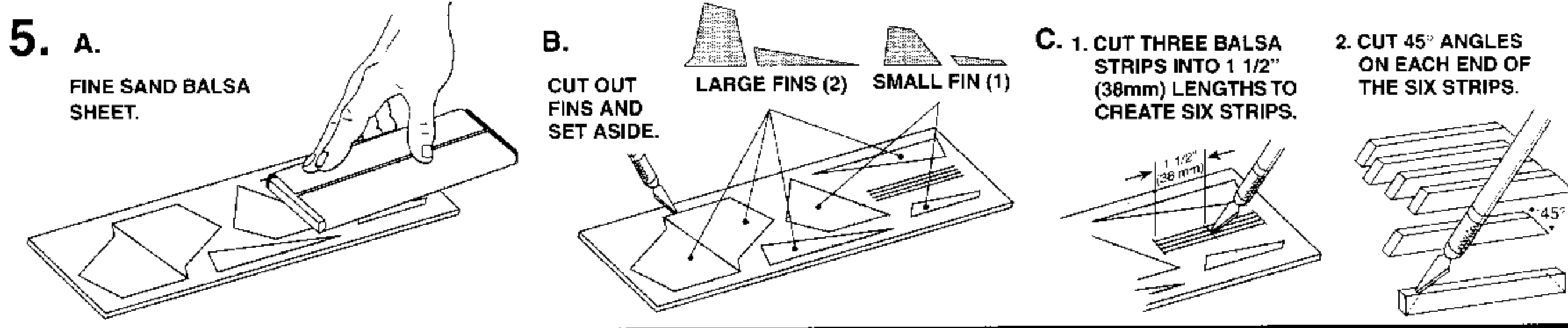
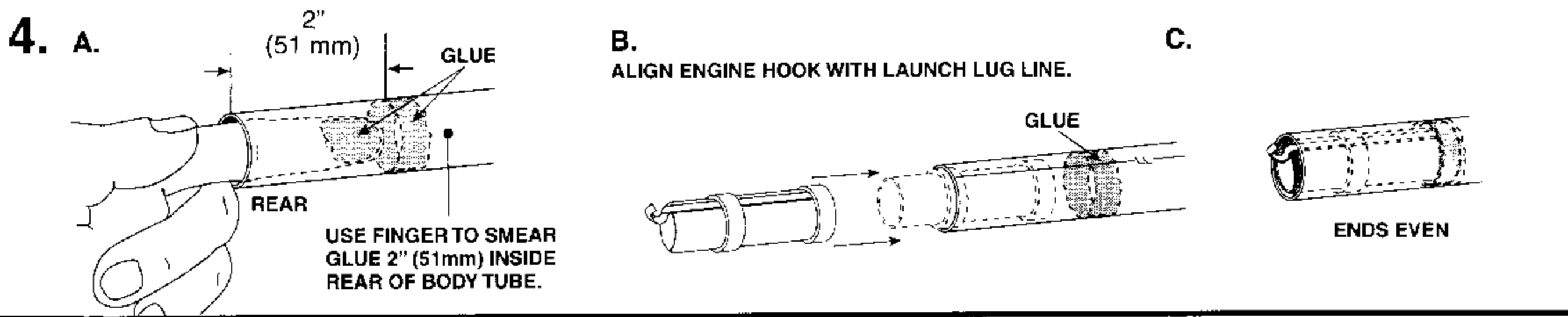
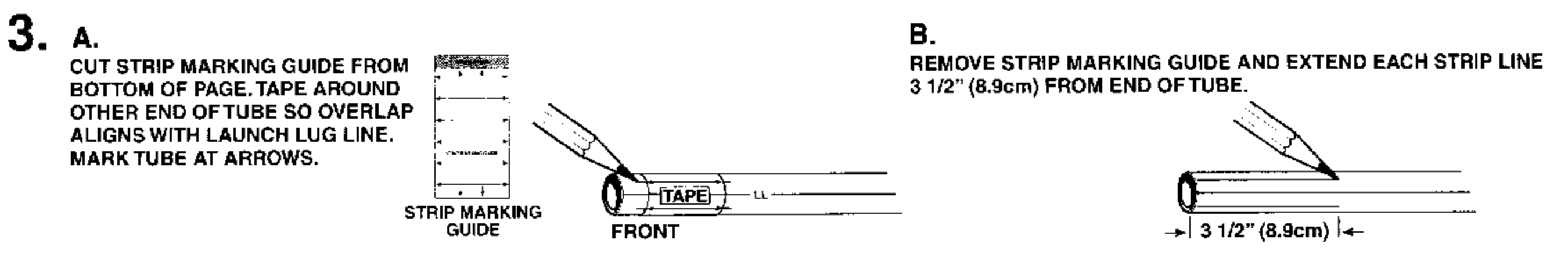
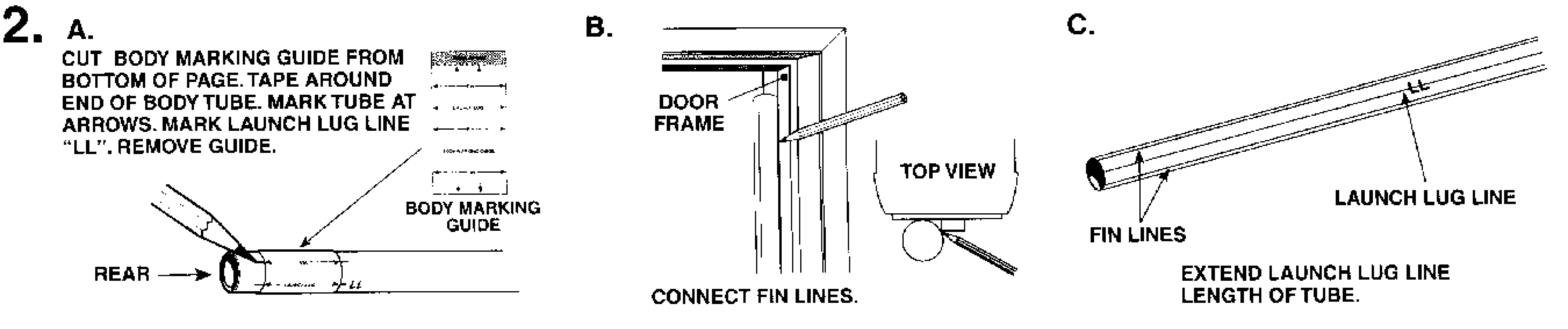
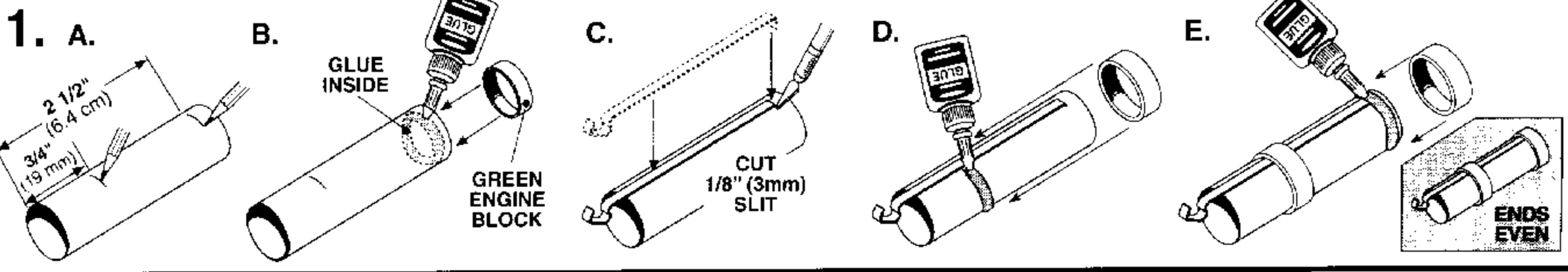
Green Centering Rings (2)
(030164-2)



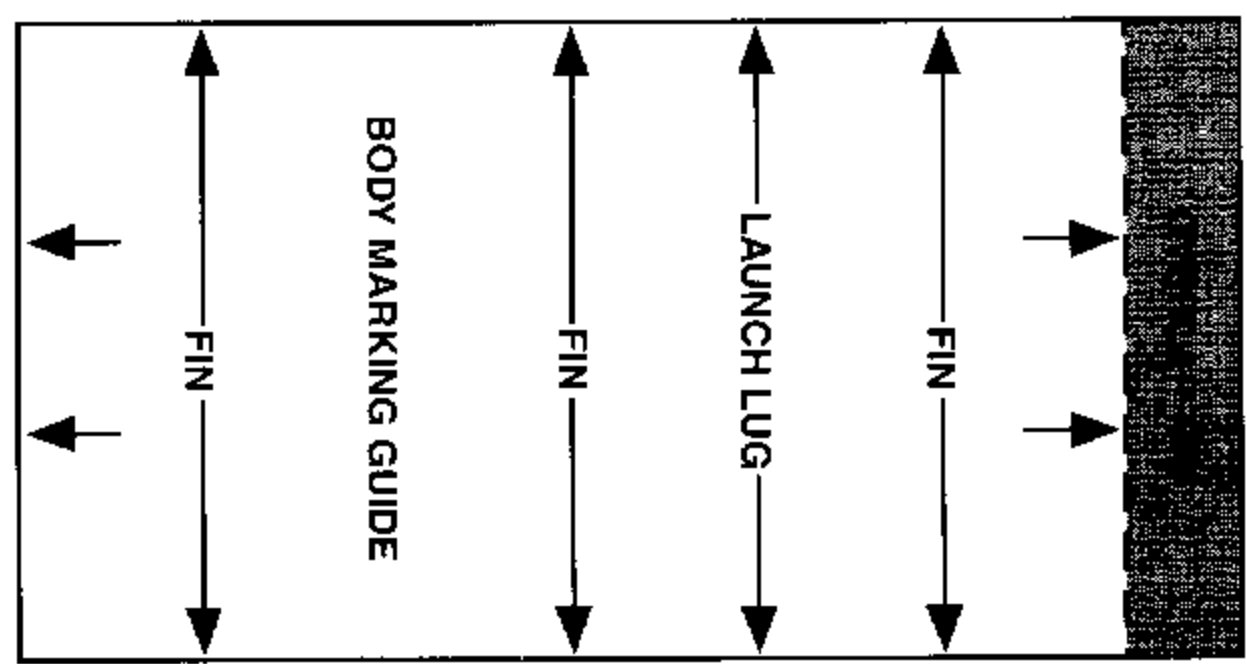
Launch Lug (1)
(038175)



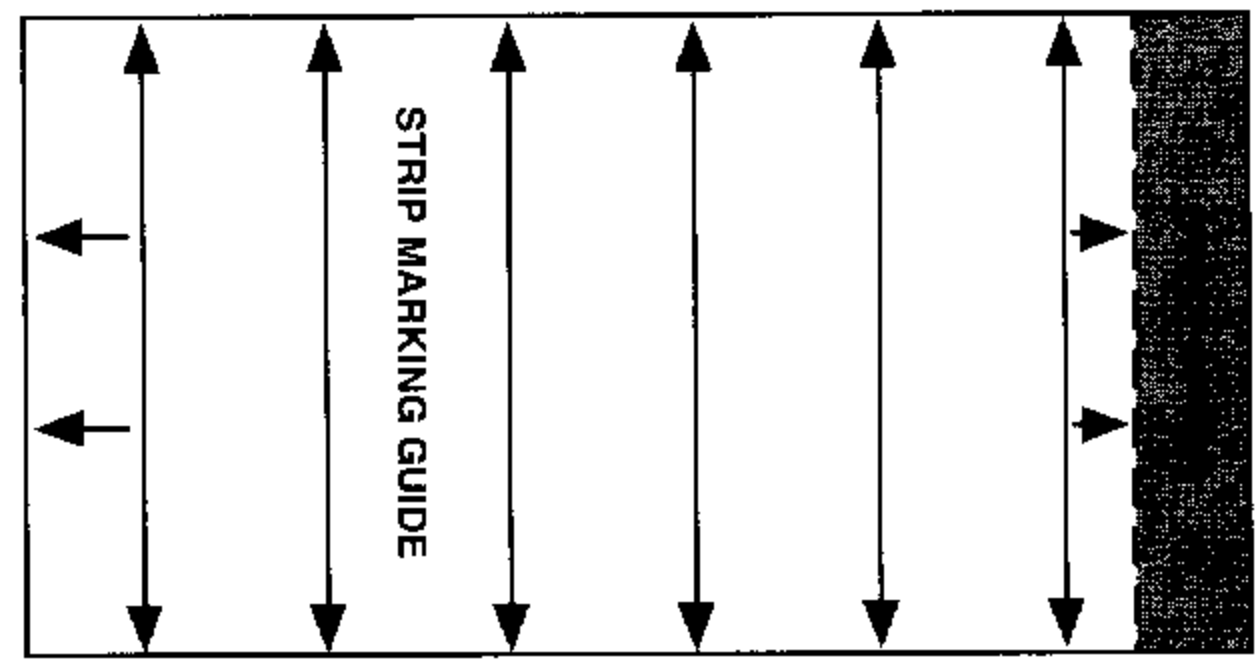
Assembled Parachute 12" (30 cm)
w/ Engine Hook and Shock Cord (1)
(035804)



CUT OUT (FOR STEP "2")

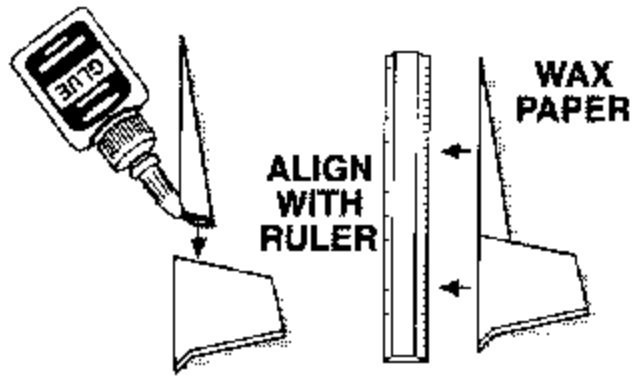


CUT OUT (FOR STEP "3")



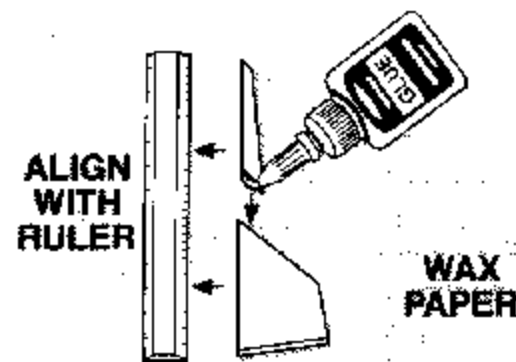
6.

A. GLUE LARGE FIN PIECES TOGETHER.



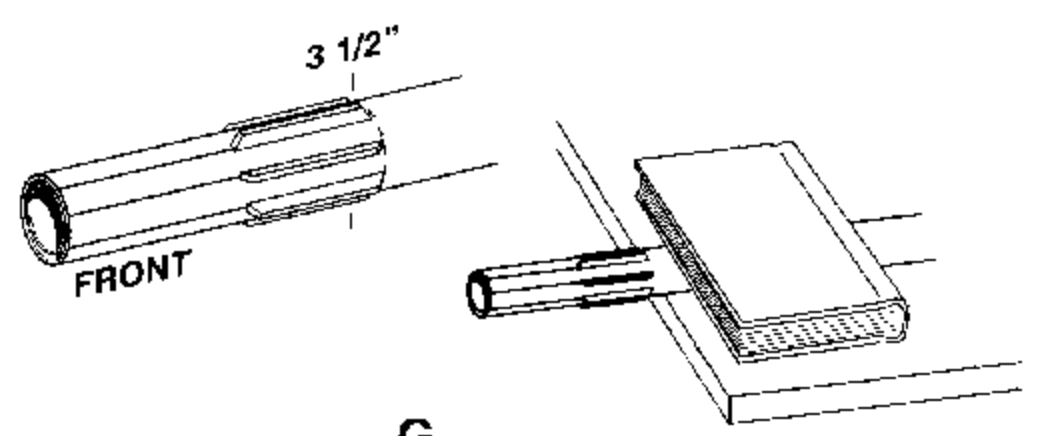
B.

GLUE SMALL FIN PIECES TOGETHER.



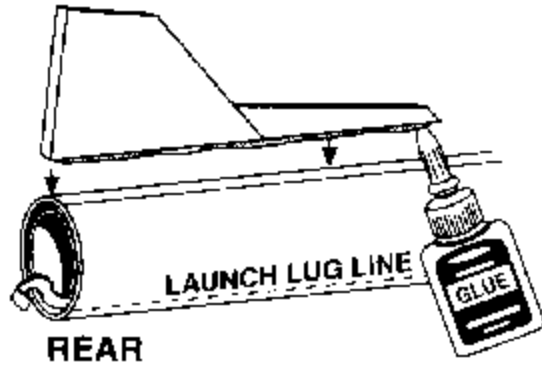
C.

CENTER STRIPS ON 6 LINES AND GLUE. LET DRY.



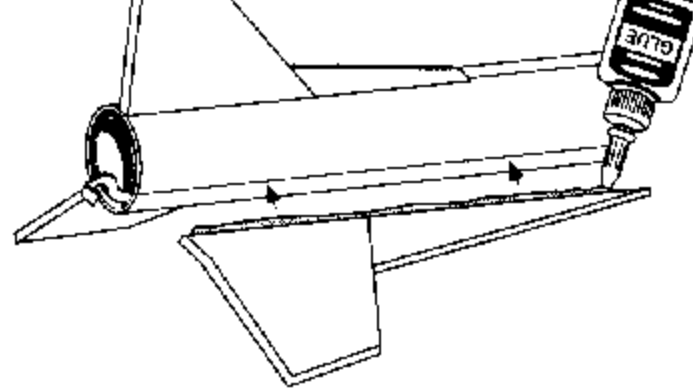
D.

GLUE SMALL FIN UNIT ON LINE OPPOSITE OF LAUNCH LUG LINE.



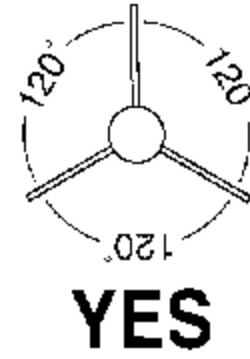
E.

GLUE REMAINING FIN S TO BODY TUBE.



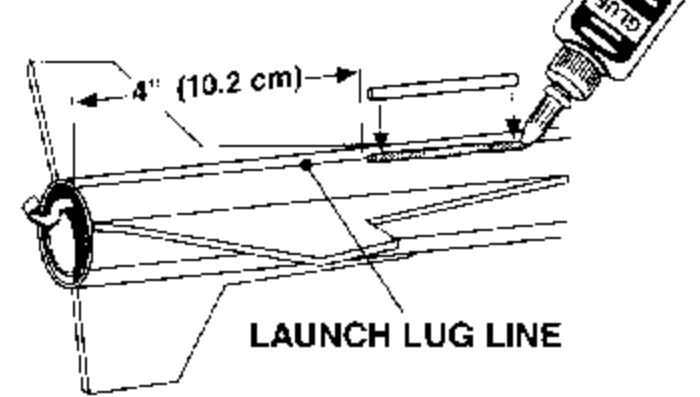
F.

CHECK FIN ALIGNMENT. FIN S SHOULD PROJECT STRAIGHT FROM THE BODY.



G.

GLUE LAUNCH LUG 4" (10.2 cm) FROM END OF BODY TUBE ON LAUNCH LUG LINE.

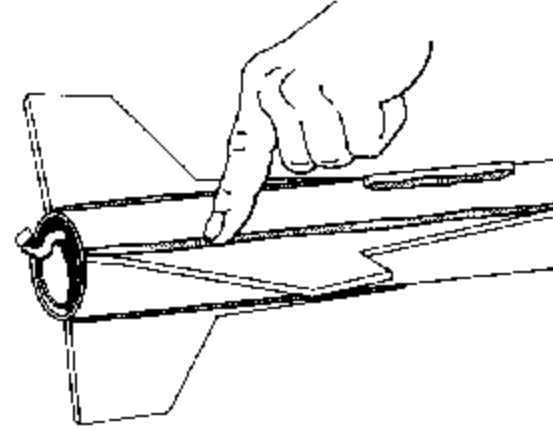


7. NOTE:

PROCEED WITH THIS STEP ONLY AFTER THE GLUE ON FIN S AND LAUNCH LUG IS THOROUGHLY DRY.

A.

APPLY GLUE FILLETS TO ALL FIN AND LAUNCH LUG/ BODY TUBE JOINTS. SMOOTH OUT WITH FINGER.



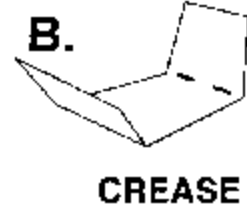
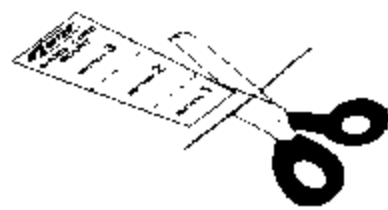
B.

ALLOW GLUE TO DRY.



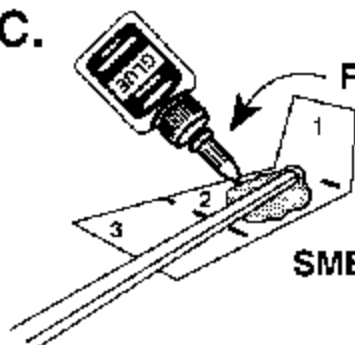
8.

A. CUT OUT SHOCK CORD MOUNT FROM FRONT PAGE.



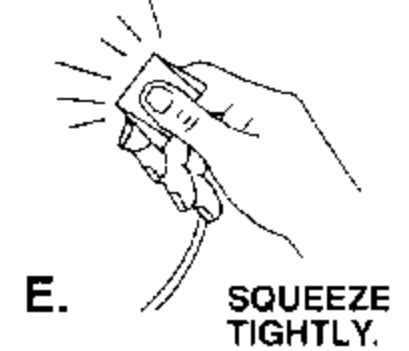
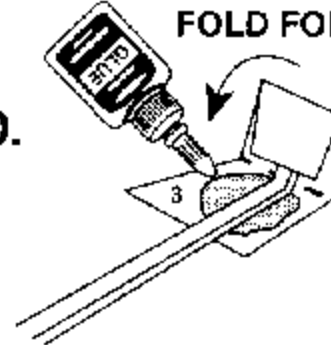
C.

C. FOLD FORWARD. SMEAR GLUE.

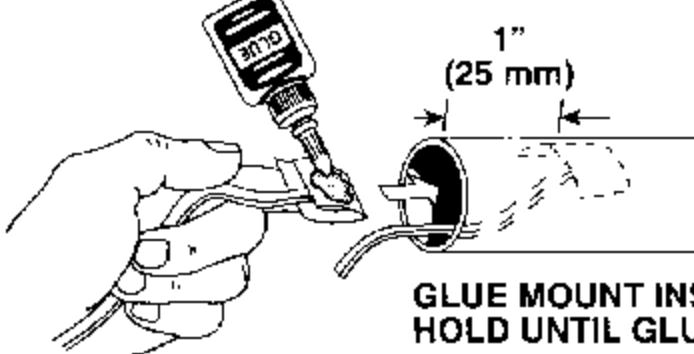


D.

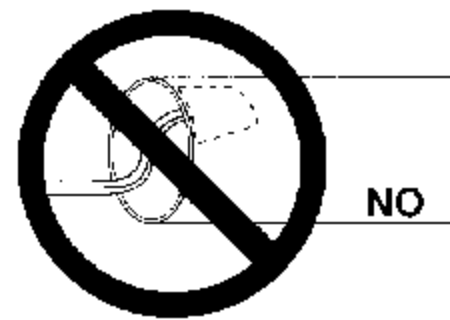
D. FOLD FORWARD.



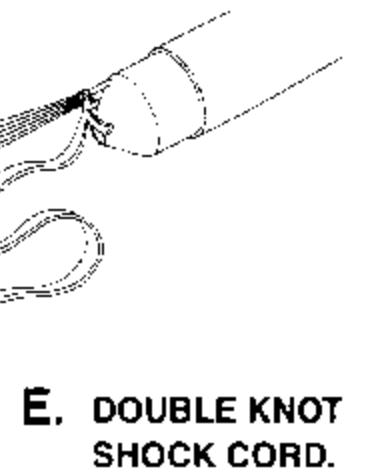
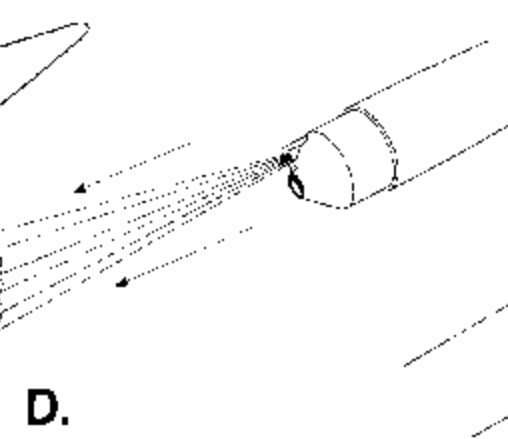
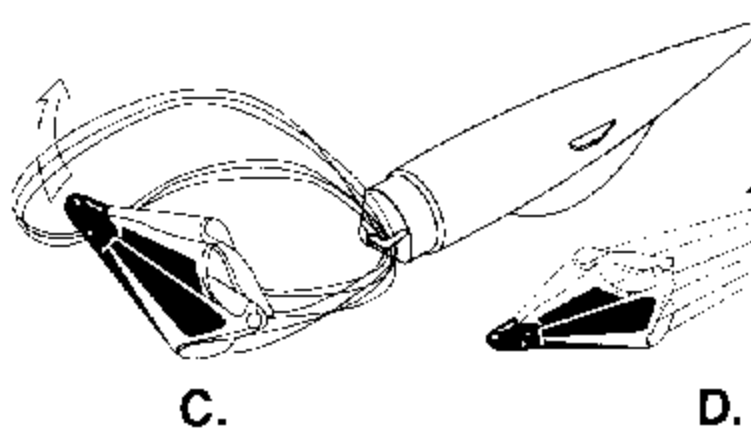
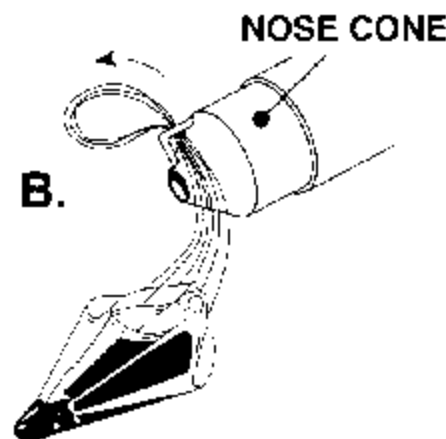
F.



GLUE MOUNT INSIDE BODY TUBE. HOLD UNTIL GLUE DRIES.

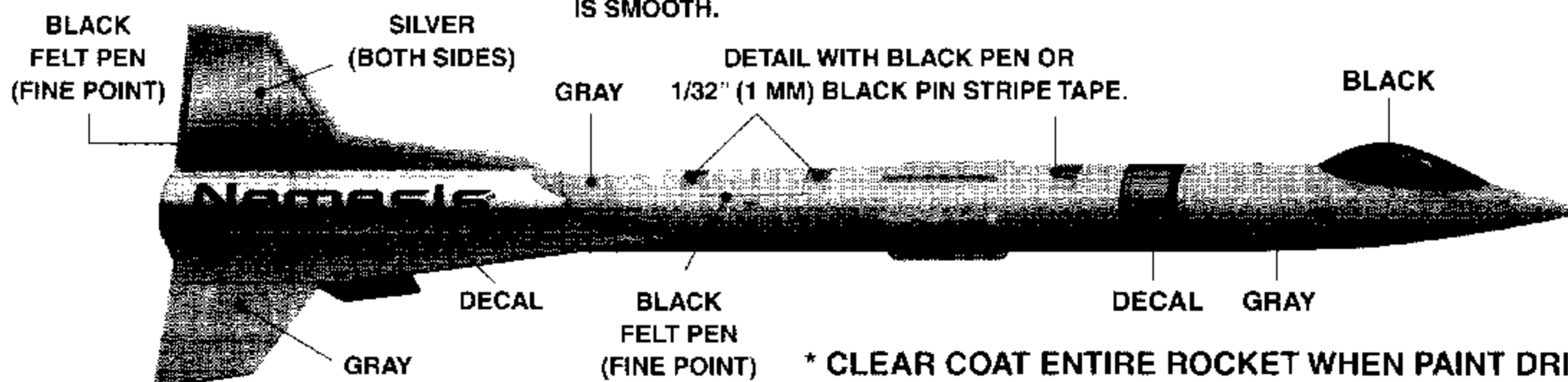


9. A. LOOP



"CONVENTIONAL" PAINT SCHEME

FIRST, SPRAY ROCKET WITH WHITE PRIMER, DRY AND SAND. REPEAT UNTIL ROCKET IS SMOOTH.

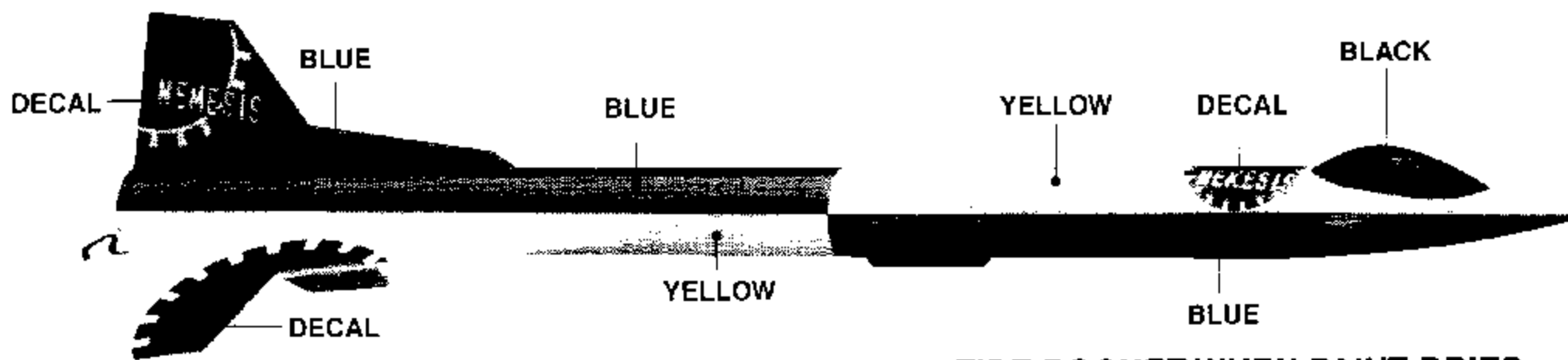


DECALS



"WILD" PAINT SCHEME

FIRST, SPRAY ROCKET WITH WHITE PRIMER, DRY AND SAND. REPEAT UNTIL ROCKET IS SMOOTH.



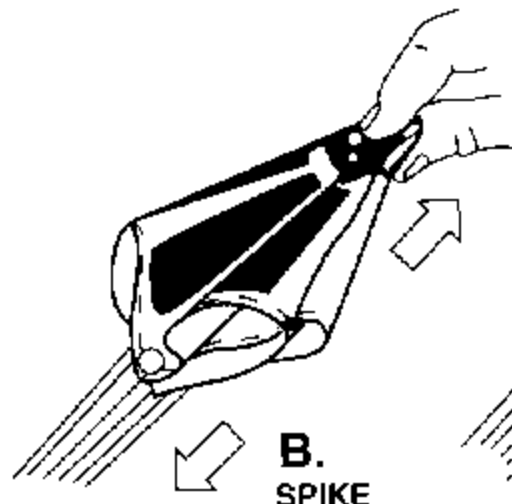
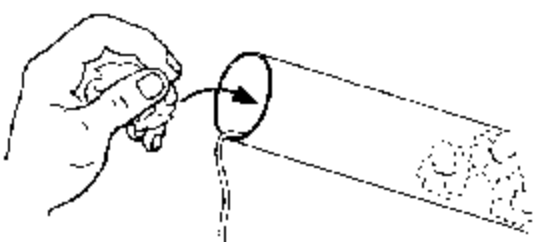
* CLEAR COAT ENTIRE ROCKET WHEN PAINT DRIES.

DECALS

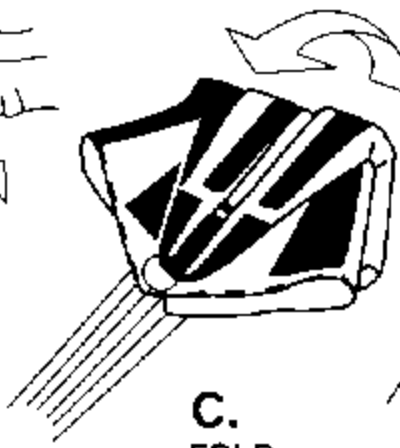


ROCKET PREFLIGHT

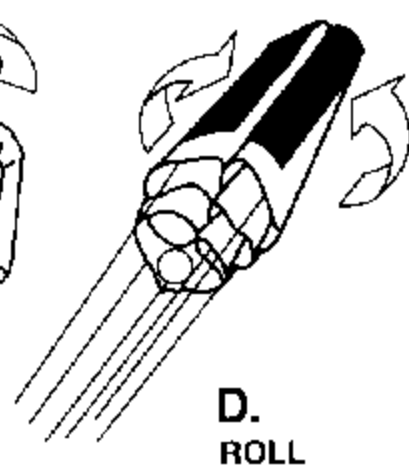
A.
INSERT 3 OR 4 LOOSELY CRUMPLED SQUARES OF RECOVERY WADDING.



B.
SPIKE

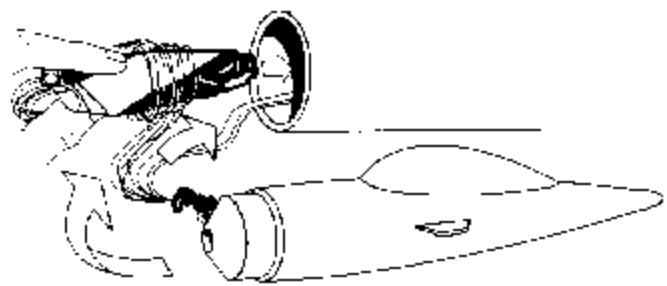


C.
FOLD

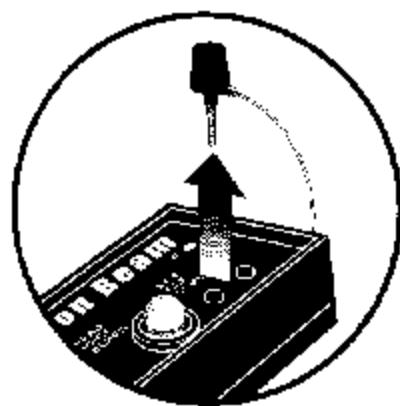


D.
ROLL

E.
WRAP LINES LOOSELY, INSERT CHUTE, SHOCK CORD AND NOSE CONE.



COUNTDOWN AND LAUNCH

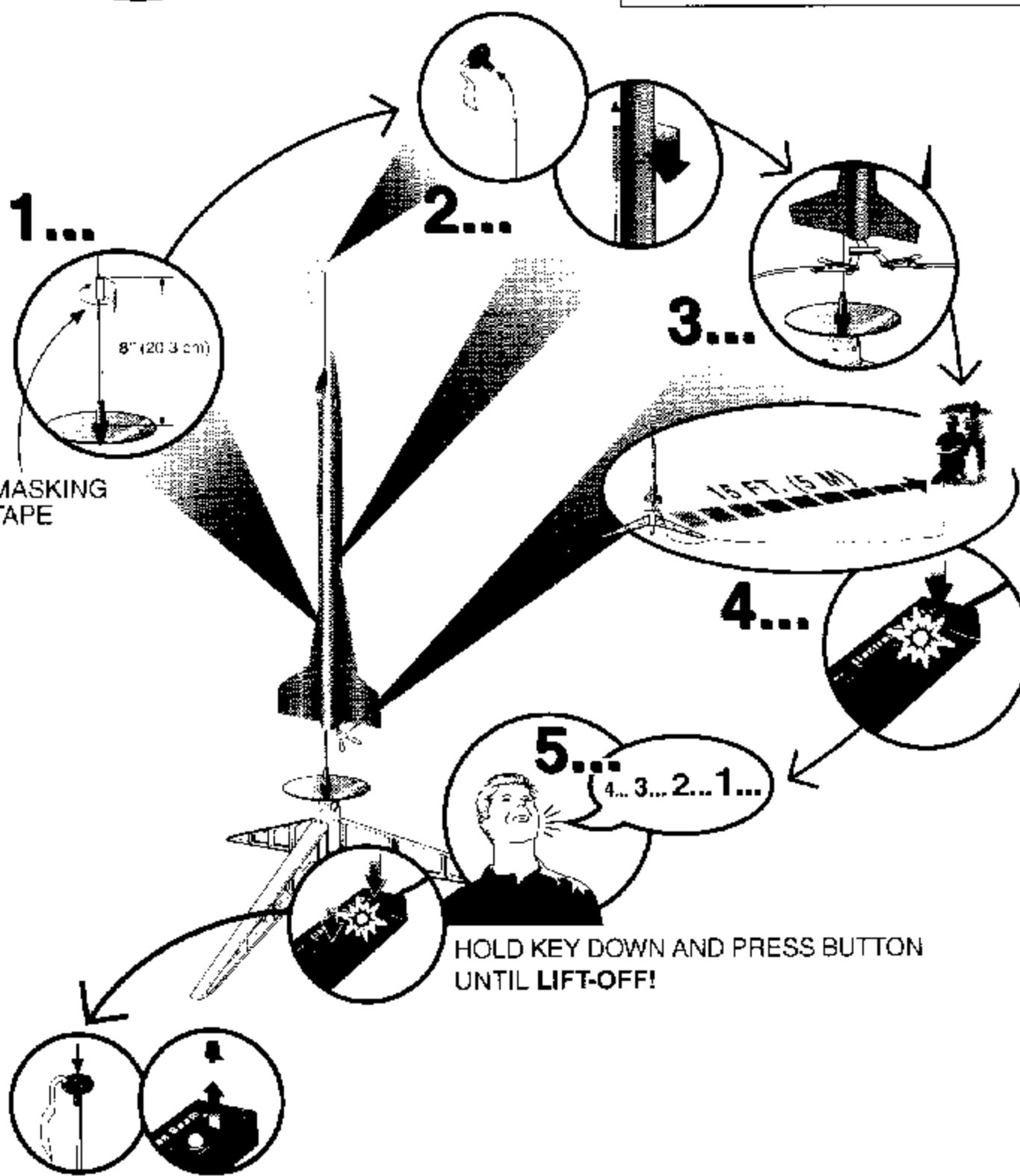


KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

LAUNCH SUPPLIES

(Sold Separately)

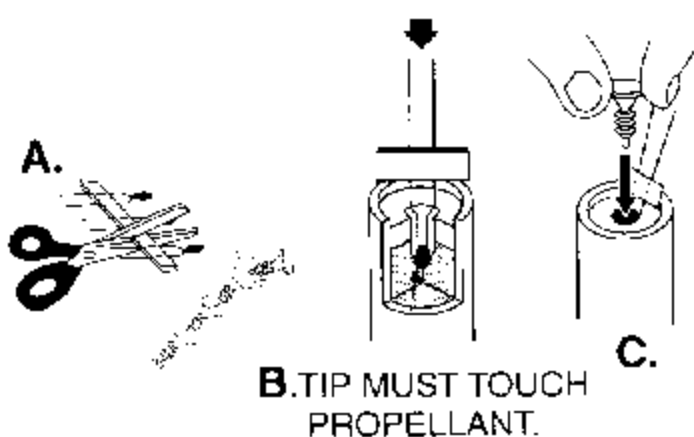
- Estes® Porta Pad® II and Electron Beam® Controller
- Recovery Wadding
- Igniters (with Engines)
- Igniter Plugs (with Engines)
- Estes® Engines: A8-3 (First Flight), B4-4 B6-4, C6-5



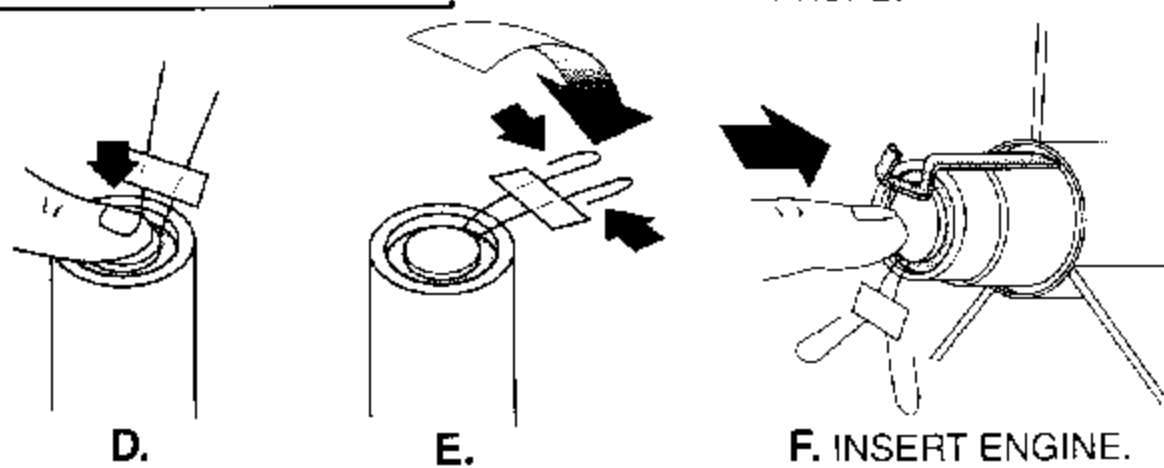
ENGINE PREP

WARNING: FLAMMABLE
Before proceeding read instructions & NAR Safety Code included with engines.

PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!
If you do not use your prepared engine, remove the igniter before storing your engine.



B. TIP MUST TOUCH PROPELLANT.



D.

E.

F. INSERT ENGINE.

PRECAUTIONS

NAR Safety Code



NO DRY GRASS OR WEEDS

FLYING YOUR ROCKET

Choose a large field (500 ft. [76 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

Always follow the National Association of Rocketry (NAR) SAFETY CODE.

MISFIRES

TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.